WHAT IS CLAIMED IS:

1. A method of using phosphotyrosine for protecting biological material from cell-damaging factors, comprising the steps of:

(a) providing of biological material, and

(b) contacting said biological material to phosphotyrosine, said contacting taking place before, during or after exposure to said cell-damaging factors.

2. The method of Claim 1, wherein said cell-damaging factors comprise radiation, and/or ultraviolet light.

3. The method of Claim 2, wherein said radiation is ionizing radiation.

4. The method of Claim 1, wherein said cell-damaging factors comprise chemicals.

5. The method of Claim 4, wherein said chemicals are cytostatic agents.

6. The method of Claim 1, wherein said biological material is skin.

7. The method of Claim 1, wherein said biological material is a tumor patient subjected to a radiation therapy.

8. The method of Claim 1, wherein said biological material is a tumor patient subjected to a chemotherapy.

9. A method for producing a pharmaceutical composition for the prophylactic and/or therapy-accompanying treatment of radiation therapy patients and/or chemotherapy patients, comprising the steps of:

(a) providing of phosphotyrosine, and

(b) formulating said phosphotyrosine into an appropriate galenics.

10. A pharmaceutical composition, comprising phosphotyrosine and a pharmaceutically acceptable carrier.

11. A culture medium, comprising phosphotyrosine and other usual buffering substances, carrier substances, auxiliary substances and/or additives.

12. The culture medium of Claim 11, comprising phosphotyrosine in a concentration range of from about 1 µM to about 100 µM.

13. A method for protecting biological material from cell-damaging factors, comprising:

(a) providing of biological material, and

(b) contacting said biological material to phosphotyrosine, said contacting taking place before, during or after exposure to said cell-damaging factors, said cell damaging factors being selected from the group consisting of: radiation, ultraviolet light, and chemicals.

14. The method of Claim 13, wherein said radiation is ionizing radiation, and wherein said chemicals are cytostatic agents.

15. The method of Claim 13, wherein said biological material is skin.

16. The method of Claim 13, wherein said biological material is a tumor patient subjected to a radiation therapy.

17. The method of Claim 13, wherein said biological material is a tumor patient subjected to a chemotherapy.

18. A method for producing a pharmaceutical composition for protection of healthy cells within the frame of prophylactic and/or therapy-accompanying treatment of radiation therapy patients and/or chemotherapy patients, comprising the steps of:

(a) providing a phosphotyrosine, and

(b) formulating said phosphotyrosine into an appropriate galenics.

19. A culture medium, comprising phosphotyrosine and other usual buffering substances, carrier substances, auxiliary substances, and/or additives, wherein said medium comprises phosphotyrosine in a concentration range of from about 1 μM to about 100 μM.

20. A method for protecting biological material from cell-damaging factors, comprising:

(a) providing of biological material, and

(b) contacting said biological material to phosphotyrosine.